

HANTAVIRUS PULMONARY SYNDROME

What is hantavirus pulmonary syndrome (HPS)?

HPS is a potentially severe disease of the lungs which was first recognized in 1993 in the "Four Corners" area (where Utah, Colorado, Arizona, and New Mexico meet) of the southwestern United States (U.S.). The disease is caused by hantaviruses, most frequently Sin Nombre virus which causes HPS in the western U.S. Cases of HPS occur throughout the U.S. but are most common in the Southwest. HPS is a rare, but often fatal, disease.

How are hantaviruses maintained in nature?

In the U.S., the hantaviruses that cause HPS are maintained in nature in wild rodents—deer mice in the West, cotton rats and rice rats in the Southeast, and the white-footed mouse in the Northeast. Other rodents, including squirrels, chipmunks, and house mice, are rarely, if ever, infected and do not pose a risk of HPS to humans.

How do you get HPS?

Infected rodents shed hantavirus in their urine, droppings, and saliva. Most patients become infected by breathing air contaminated with rodent urine or droppings, such as when cleaning out a rodent-infested space. Individuals can also be infected by: 1) consuming food contaminated with rodent urine or droppings; 2) touching surfaces where rodents have been, and then putting their hand in their mouth; 3) being bitten by an infected rodent.

What are the signs and symptoms of HPS?

Typically, infected persons develop symptoms one to two weeks after exposure. Early symptoms of HPS include fever, headache, and muscle aches, especially the thighs, hips, back, and shoulders. Other early symptoms include dizziness, chills, nausea, vomiting, diarrhea, and abdominal pain. After two to seven days of these symptoms, patients develop breathing difficulties that range from cough and shortness of breath to severe respiratory failure. Approximately 40 percent of HPS patients die from the disease.

How is HPS diagnosed?

Persons with HPS can be readily diagnosed by specific blood tests.

What treatment is recommended for HPS patients?

Currently, there is no specific treatment for HPS. However, if infected individuals are recognized and hospitalized early, supportive care can increase their chance for survival. Patients with severe respiratory disease can require intensive support of their heart and lung function.

How can I avoid getting HPS?

Avoid contact with all wild rodents, their droppings, and nesting materials. Store all food items securely in rodent-proof containers. Examine the outside of all buildings and block up any holes or other areas that would let rodents get inside. Before entering an enclosed area that may be contaminated with rodent material, allow it to air out for several hours. Surfaces where rodents may have been should be wetted with a dilute bleach solution before mopping up. Do not use a broom or vacuum to clean these areas. Promptly dispose of all cleaning materials when done, and wash hands and clothes.

Where can I find more information about HPS?

The Centers for Disease Control and Prevention has information available at their website <http://www.cdc.gov/ncidod/diseases/hanta/hantvirus.htm>.